

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
14 April 2005 (14.04.2005)

PCT

(10) International Publication Number  
**WO 2005/033131 A1**

- (51) International Patent Classification<sup>7</sup>: **C07K 14/415**
- (21) International Application Number:  
PCT/NZ2004/000247
- (22) International Filing Date: 11 October 2004 (11.10.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
NZ 528780 9 October 2003 (09.10.2003) NZ
- (71) Applicants (*for all designated States except US*): **NEW ZEALAND INSTITUTE FOR CROP & FOOD RESEARCH LIMITED** [NZ/NZ]; Gerald Street, Lincoln, Canterbury, 8152 (NZ). **CANTERPRISE LIMITED** [NZ/NZ]; University of Canterbury, University Drive, Ilam, Christchurch, 8020 (NZ).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **LARSEN, Nigel, Grant** [NZ/NZ]; c/- New Zealand Institute for Crop & Food Research Limited, Private Bag 4704, Christchurch, 8020 (NZ). **SUTTON, Kevin, Howard** [NZ/NZ]; c/- New Zealand Institute for Crop & Food Research Limited, Private Bag 4704, Christchurch, 8020 (NZ). **GERRARD, Juliet, Ann** [NZ/NZ]; c/- School of Biological Sciences, University of Canterbury, Private Bag 4800, Christchurch, 8020 (NZ). **WATERHOUSE, Sarah, Helen** [NZ/NZ]; c/- School of Biological Sciences, University of Canterbury, Private Bag 4800, Christchurch, 8020 (NZ).
- (74) Agent: **BALDWINS?**; 342 Lambton Quay, Wellington, 6001 (NZ).
- (81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
- *with international search report*
  - *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: **AMYLOID FORMATION**

(57) Abstract: A protein must fold into a specific conformation in order to carry out its intended function. Failure to fold correctly may lead to self-association and aggregation, and formation of a highly ordered and insoluble form of protein - the amyloid fibril. Amyloid fibrils are associated with a growing number of human diseases and are thus of significant medical interest. Current interest in amyloid has also grown within the wider protein science research community, based on the discovery that these unusual structures are likely to represent a generic form of all proteins. The invention provides amyloid fibrils, for novel biomaterials development, from a heterogeneous protein mixture. In particular it provides a protein derived as a secondary product from an industrial production process (wheat gluten) to make amyloid fibrils for novel biomaterials.

WO 2005/033131 A1